Ontology and Language for Intelligent Reusable Autonomy

Completed Technology Project (2017 - 2018)

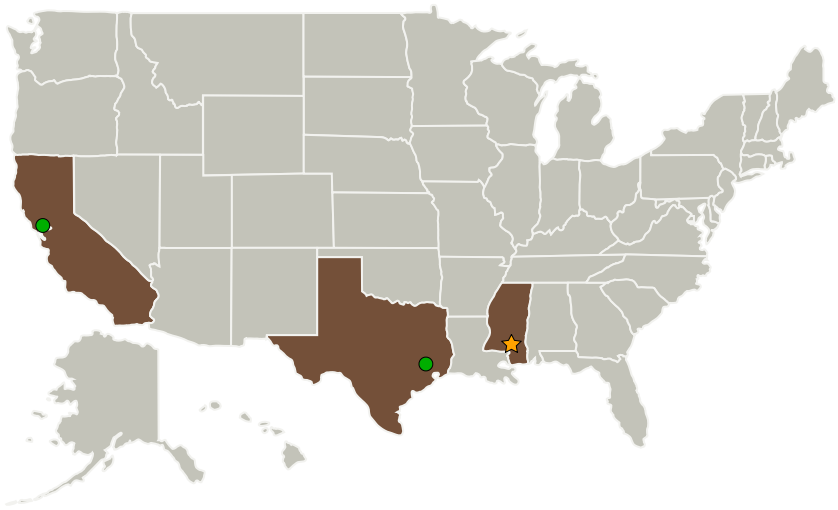
Project Introduction

The innovation consists of enabling thinking by the autonomous system, so that autonomous strategies may be inferred by the computers as a thought process. The autonomous capability will be developed to be able to analyze the system it is running by using concepts, and models that employ the concepts. Ontology (language and semantics) is needed to achieve what could be called Intelligent Autonomy, but it must be application independent to the highest degree possible.

Anticipated Benefits

Future uses include autonomy in test and launch systems, space vehicles, and Moon/Mars settlements.

Primary U.S. Work Locations and Key Partners



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Center Innovation Fund: SSC CIF

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Organizations Performing Work	Role	Type	Location
★Stennis Space Center(SSC)	Lead Organization	NASA Center	Stennis Space Center, Mississippi
●Ames Research Center(ARC)	Supporting Organization	NASA Center	Moffett Field, California
●Johnson Space Center(JSC)	Supporting Organization	NASA Center	Houston, Texas

Co-Funding Partners	Type	Location
Space Technology Mission Directorate(STMD)	NASA Mission Directorate	

Primary U.S. Work Locations	
California	Mississippi
Texas	

Project Website:

https://www.nasa.gov/directorates/spacetech/innovation_fund/index.html#.VC

Organizational Responsibility

Responsible Mission Directorate:

Space Technology Mission Directorate (STMD)

Lead Center / Facility:

Stennis Space Center (SSC)

Responsible Program:

Center Innovation Fund: SSC CIF

Project Management

Program Director:

Michael R Lapointe

Program Manager:

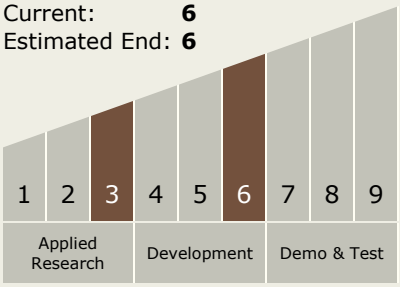
Ramona E Travis

Principal Investigator:

Fernando Figueroa

Technology Maturity (TRL)

Start: **3**
Current: **6**
Estimated End: **6**



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Technology Areas

Primary:

- TX11 Software, Modeling, Simulation, and Information Processing
  - TX11.4 Information Processing
    - TX11.4.3 Semantic Technologies

Target Destinations

Earth, The Moon